process was defined as the state function of some system whose state at a future time can be probabilistically predicted from its present state, in a way that cannot be improved by taking account of previous states—known as the Markov property. Nowadays, many economic models use the Markov technique and are limited by its property. The correctness of this approach is questionable, as will be addressed in the workshop. In an attempt to adhere to a well-known technique, many researchers tend to ignore the memory component inherent to the disease. Although this major simplification makes the development and computation of these models easier, it often departs substantially from reality. Others circumvent the consequences of the core philosophy behind the technique and simulate memory by creating tunnel states. This only provides a partial, suboptimal solution, however. We feel researchers should urgently shift their focus to other modeling approaches better suited to the specific research question. Although more complicated, the development of memory-based models is clearly feasible with today's computer capabilities, as we will illustrate based on our own experience.

WMM2

ECONOMIC EVALUATION OF PROSPECTIVE MULTINATIONAL CLINICAL TRIALS: A MODELING APPROACH

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WORKSHOP OBJECTIVE: A modeling approach to the use of data from a multinational clinical trial for economic evaluation of a new product in a specific participating country is described. Treatment effectiveness is estimated based on efficacy data using all participating countries. Costs to a relevant healthcare perspective and to society are modeled based on clinical response to treatment combined with health resource use in the specific country of interest. Costs for patients dropping off study treatment may be estimated from other sources and used in the model for a more comprehensive estimate of total costs and consequences.
PARTICIPANTS WHO WOULD BENEFIT: Researchers involved with the design or conduct of economic evaluations related to prospective clinical trials.

In many countries, economic evaluation of new products is required or has come to be expected by regulatory and clinical audiences rapidly after product launch. Multinational clinical trials powered to estimate efficacy and safety against a standard treatment using data from all countries combined have become common in phase III of the drug development process. Many researchers are using this valuable opportunity to collect high quality RCT data on health resource use, quality of life and patient preferences. In contrast to efficacy and safety information, it may not be possible to directly combine health resource use from several countries due to between-country differences in healthcare systems, treatment practice patterns, and healthcare seeking behavior. We describe the use of a decision tree model to structure the evaluation with estimates of treatment efficacy, safety, and resource use collected from the clinical trial.

WMS1

ESTIMATING MEDICAL COSTS FROM INCOMPLETE FOLLOW-UP DATA

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WORKSHOP OBJECTIVE: The purpose of this workshop will be to develop skills in the analysis of cost data at the patient level when incomplete follow-up or dropouts result in censored cost data. We will identify the conditions when univariate summary data are unbiased as well as the conditions when various multivariate techniques using regression analysis and survival analysis are required for unbiased estimates.
PARTICIPANTS WHO WOULD BENEFIT: Researchers and analysts involved in the methodological and analytic aspects of pharmacoeconomic studies as well as those who want to increase their understanding of the literature of economic evaluation in clinical trials.

As treatment costs are increasingly determined from individual level cost data, analysts have become increasingly aware of the difficulty in characterizing medical costs for all individuals for comparable durations of time. It is common for data on resource use and/or costs not to cover the entire duration of the study. This may be due to the final design (e.g., rolling admission and a fixed stopping date), limited commitment to the collection of economic data, or individuals dropping out of the economic study or the administrative database. Different models for analyzing costs should be used depending on the answers to the following questions: Are the dropouts concentrated among the most severe patients? Are the reasons for dropouts related to the treatment drug? Could the dropouts be related to some unmeasured phenomenon that is correlated with costs? Is death a possibility among the dropouts? Practical guidance will be provided for applying the appropriate methods by critically reviewing the statistical models for addressing these issues using a resent AIDS trial as an example.

WMD1

DATA COLLECTION METHODS FOR RESOURCE UTILIZATION: CHOOSING THE RIGHT APPROACH

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WORKSHOP OBJECTIVE: The purpose of this workshop will be to develop a deeper understanding of vari-

ous data collection methods; to provide an interactive forum for discussing recommendations for the use of each method; and to discuss the implications that alternative measurement strategies may have on reported results.
PARTICIPANTS WHO WOULD BENEFIT: This session is directed at individuals who are responsible for the design and conduct of pharmacoeconomic evaluations. Individuals who need to interpret study results will also benefit from this workshop.

Pharmacoeconomic studies are often designed without the appropriate concern for, or justification of, the data collection method used. Previous research has focused mainly on what data to collect rather than how to collect the data. This current research focuses on the issue of study validity through the use of various data collection strategies. This workshop will discuss the appropriate application of each strategy and provide recommendations for the employment of particular data collection methods in the context of specific studies. Methodologies to be discussed include office-based self-administration, patient diaries, face-to-face interviews (written and oral), telephone interviews (personal and CATI), and postal surveys. The research presented here augments earlier research by informing researchers of potential issues with data collection techniques on resource utilization collection.

WMQ1

THE SCHIZOPHRENIA CARE AND ASSESSMENT PROGRAM HEALTH QUESTIONNAIRE (SCAP−HQ): A BRIEF INSTRUMENT TO ASSESS OUTCOMES OF CARE IN SCHIZOPHRENIA

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WORKSHOP OBJECTIVE: Advances in treatment for schizophrenia and the development of evidence-based standards of care demand better methods for population-based research on this disease and routine assessment of treatment outcomes in systems of care. The purpose of this workshop is to introduce the Schizophrenia Care and Assessment Program Health Questionnaire (SCAP−HQ), a brief instrument to measure the clinical and functional outcomes of care for schizophrenia. We will describe the rationale for the instrument, the process of its development, and its scope of measurement. We will discuss the validity of the SCAP−HQ in relation to concurrent administration of major clinical and functional instruments for schizophrenia. We will consider applications of SCAP−HQ in longitudinal studies and present results of its use in this context. The participant will understand potential applications of the instrument in research and routine assessment.
PARTICIPANTS WHO WOULD BENEFIT: Providers of care for schizophrenia and researchers with interest in methods to measure and monitor outcomes of treatment in actual care settings.

Schizophrenia affects about one percent of the population and exacts substantial human and economic costs. We will discuss the development, validation, and applications of a new instrument (SCAP−HQ) to assess outcomes of care for this disease in research or routine clinical assessment. We will address measurement of patients' disease status (symptoms, side effects), generic health status, functional status (productivity, social relations, daily activities, leisure), quality of life, and safety and welfare. We will evaluate the instrument's performance with respect to internal consistency, test-retest reliability, and criterion validity in comparison to existing instruments. We will discuss use of the instrument to model the effect of prior period clinical status, medication therapy, and other patient characteristics on clinical and functional outcome. Participants with interest in patient-centered methods for schizophrenia outcomes assessment will benefit from this workshop.

SESSION 2

WPE4

AN ELECTRONIC TOOL FOR EMPIRIC ASSESSMENT OF DISEASE RISK, CATEGORIZATION OF PATIENTS AT RISK AND MONITORING OF OUTCOMES

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WORKSHOP OBJECTIVE: The purpose of this workshop is to present Multiple Disease Risk Assessment 2000 (MDRA 2000), a tool for empiric assessment of disease risk factors, categorization of patients at risk, and monitoring of patient outcomes.
PARTICIPANTS WHO WOULD BENEFIT: Healthcare decision-makers and others involved in the process of monitoring and evaluating patient outcomes.

Identifying patients at risk for disease and providing appropriate care can improve patient outcomes and results in significant cost reductions to healthcare systems. Multiple Disease Risk Assessment 2000 provides clinicians with a valuable tool for performing a systematic analysis of patients at risk of developing a selected disease, infection, or medical complication. The tool can identify presence of key risk factors, serve as a guideline for initiating a therapeutic intervention, and can help identify factors